Combined Sensor with Two Pt1000 Inputs and One Input for Digital Probes, Ethernet Output and PoE



code: TA3645

The TA3645 model represents a hybrid Ethernet sensor that combines two highly accurate analog inputs for Pt1000 resistance probes with one digital input (for T+RH or CO2 probes).
Thanks to this configuration, the TA3645 is a universal monitoring device capable of measuring in the extreme range of -200 °C to +260 °C with an accuracy of ±0.2 °C.

The device is an ideal solution for demanding applications in healthcare or industry: Pt1000 inputs reliably monitor refrigerators, freezers, cryogenic boxes, or ovens, while the digital probe simultaneously monitors the room climate (temperature, humidity, or CO2).

For convenient operation and easy integration, the TA3645 offers a large backlit LCD display, acoustic alarm signaling, and PoE support. It also features a cable resistance compensation function for Pt1000 probes directly from the web interface.

Main Benefits:

- 2x Pt1000 input + 1x digital T+RH or CO2 probe
- Extreme temperature measuring range from -200 °C up to +600°C
- Backlit LCD display, acoustic and LED alarm signaling
- Power supply 5–24 V or PoE
- Integrated backup memory
- Modern web interface, IPv4/IPv6 support, Modbus TCP, COMET Cloud, and fully encrypted communication (HTTPS, SNMPv3, TLS)
- Integrated detachable bracket for easy installation

Technical data

TEMPERATURE SENSOR	
Measuring range	-200 to +260 °C Optional range extension to -200 to +600 °C at an additional cost
Accuracy	±0.2 °C in the range below +100 °C; ±0.2% of the measured value in the range above +100 °C
Resolution	0.1 °C
HUMIDITY SENSOR	
Measuring range	Depending on the connected DSxx probe
Accuracy	Depending on the connected DSxx probe
Resolution	0.1% RH
DEW POINT	
Measuring range	Depending on the connected DSxx probe
Accuracy	Depending on the connected DSxx probe
Resolution	0.1 °C
CO2 SENSOR	
Measuring range	0 to 10,000 ppm
Accuracy	±(100 ppm + 5% of reading) at 23 °C and 1,013 hPa

Resolution	1 ppm
CO2 probe cable length	1, 2 or 4 meters
GENERAL TECHNICAL DATA	
Operating temperature range	-30 to +60 °C
Measurement channels	2× Pt1000 inputs + 1× digital T+RH or CO_2 probe, CINCH / ELKA connectors
Calculated values	dew point temperature, absolute humidity, specific humidity, mixing ratio, specific enthalpy, humidex, heat index
Supported temperature units	degrees Celsius (°C), degrees Fahrenheit (°F)
Temperature compensation of the humidity sensor	across the entire temperature range
Power supply	Power over Ethernet (IEEE 802.3af) or 5–24 V DC
Network interface	Ethernet
IP support	IPv4, IPv6
Communication protocols	HTTP(s), Web server (WWW), HTTP GET (JSON, XML), Modbus TCP, SNMPv1, SNMPv2c, SNMPv3
Alarm protocols	Email (SMTP), Syslog
Measurement interval	1 s
Ingress protection (IP rating)	IP30 (electronics)
Dimensions	116 × 85 × 42 mm (without connected probe)
Weight	220 g
Warranty	3 years